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Abstract -- Motivated by Lyson's concept of "civic agriculture", this paper examines case studies of four innovative U. S. mid-scale food value chains to provide models of how mid-sized farms and ranches and associated processing, distribution, and retail businesses can prosper by acting collectively to construct a "third tier" in the U.S. agri-food system. Specifically we consider the importance of acting collectively functions at three distinct levels— horizontally among producers, vertically within food value chains and horizontally across food value chains. These mid-scale food value chains represent strategic alliances among mid-sized farms and other agri-food enterprises that operate at regional levels, handle significant volumes of high-quality, differentiated food products, and distribute profit margins equitably among the strategic partners. Historically medium-sized "farming occupation" farms have been the backbone of the U. S. agricultural sector. In recent decades, these farms have been severely challenged as they are often too small individually to compete successfully in international agricultural commodity markets and too large and/or poorly positioned to directly market food to local consumers. Yet they remain important for many reasons including their environmental stewardship, contributions to community vitality, and the role they play in maintaining a diverse, resilient, and more sustainable structure of agriculture. From a market perspective, the key advantage of these food value chains is their ability to provide high quality, differentiated products not available through the mainstream commodity market.

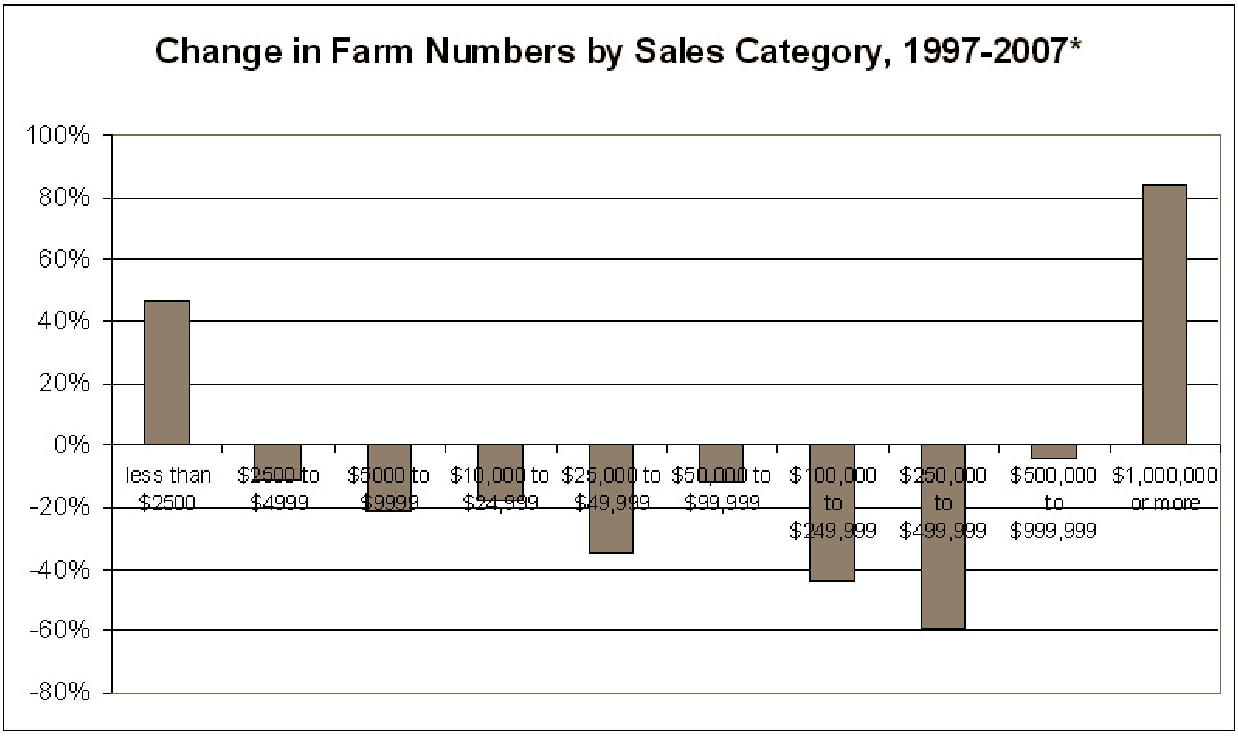
Key Words: supply/value chains, sustainability, differentiated products, strategic partnerships, community of practice, civic agriculture

INTRODUCTION and BACKGROUIND

In 1999, Thomas Lyson coined the expression "civic agriculture" to refer to "production, processing, and distribution systems that are connected to people and places" (Lyson, 2004). Although initially focused on small producers and local markets, Lyson and others recognized this same formula could be applied to the design of other larger production and distribution systems in which "The imperative to earn a profit is filtered through a set of cooperative and mutually supporting social relations" (Lyson, Thomas, G. Stevenson, and R. Welsh. 2008.). This paper uses four detailed case studies to examine how mutually supporting social relations, acting collectively, functions at three distinct levels— horizontally among producers, vertically within food value chains and horizontally across food value chains.[1]

Historically medium-sized, "farming occupation" farms have been the backbone of the U. S. agricultural sector. Farms in this size range have been severely challenged because they are often too small individually to compete successfully in global agricultural commodity markets and too large and/or poorly positioned to directly market their products to local consumers. As shown in Figure 1, their numbers are in rapid decline. Yet these mid-sized farms remain important for many reasons including their often exceptional environmental stewardship, their contributions to community vitality, and the role they play in maintaining a diverse, resilient, and more sustainable structure of agriculture.

Figure 1: Change in Farm Numbers by Sales Category, 1997-2007*



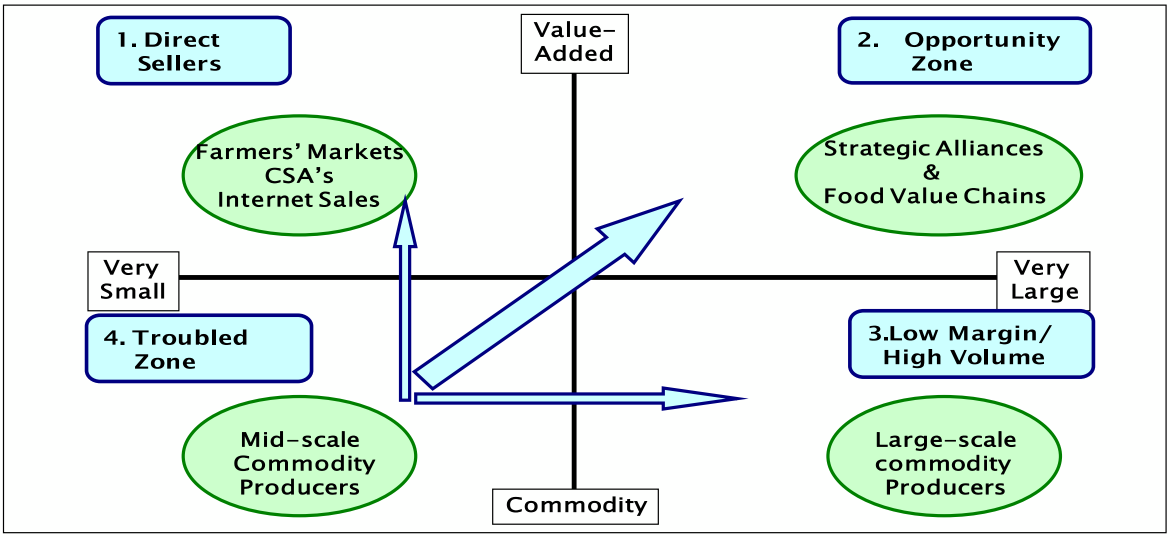
Source: USDA 2007 Census of Agriculture, *adjusted for farm price inflation

[1] The terms food value chain and supply chain are used interchangeably in this paper

Figure 2 provides a graphical depiction of the options available to farms of the middle. While some can get bigger and compete successfully in global markets and others can focus on localized markets, the majority face an uncertain future unless they can transition to different market and business models.

The four mid-scale food value chains we studied vary in their organizational structure, location in the country, types of products handled, and volume of sales. They all can be characterized as strategic alliances among mid-sized farms and other agri-food enterprises that operate at regional levels, handle significant volumes of high-quality, differentiated food products, and distribute profit margins equitably among the strategic partners. In addition, the products possess unique food stories that identify where the food comes from and how it is produced, and they reach the marketplace via transparent supply chains built on equitable business relationships that consumers trust and support. Within the farmers function as strategic partners not as interchangeable input suppliers. They receive prices based upon reasonable calculations of their production and transaction costs, develop fair agreements and contracts for appropriate time periods, and are able to control their own brand identities as far down the supply chain as they choose.

Figure 2: Business and Marketing Options



The cases vary significantly in number of member farms in each strategic alliance (under 50 to over 1300), value of sales (less than $1,000,000 to over $500,000,000), and style of organization (two are cooperatives and two are not). But they also share much in common and provide significant insights to others. The strategies that they follow and that we analyzed and evaluated are grounded in solid business theories for developing competitive enterprises that produce and market products that have "unique and superior value" (Porter, 1998). Yet they dynamically employ both the power of collective action and collaborative business partnerships (Handfield and Nichols 2002) to create "fair trade" business models that distribute value equitably among business partners in both international and domestic markets (Jaffee et al. 2004).

The four cases are[2]:

- **Country Natural Beef --** a 120-member beef rancher cooperative in the northwestern United States;

- **CROPP/Organic Valley --** a 1,300-member, multi-regional farmer cooperative marketing organic dairy, eggs, vegetables and other products;

- **Shepherd's Grain** -- a 35-farmer limited liability corporation marketing sustainably grown and functionally specified wheat flour in the northwestern United States;

- **Red Tomato --** a non-profit, domestic fair-trade business that provides marketing services to 35 fruit and vegetable farmers in the northeastern United States.

Selected cross case findings highlight the importance of:

- Developing pricing systems based on two principles: 1) supply management and stable prices, and 2) cost of production-based pricing;

- Communicating the deeper, more complex values that differentiate these supply chains from the mainstream including land stewardship, fair returns to all supply chain participants, and maintenance of diverse farm and ranch structures;

- Screening of potential new producer-members by existing members in terms of both production capabilities and integrity;

- Using the four enterprises to fill an "honest broker/fair trader" role within the supply chain;

- Employing farmers and ranchers as business representatives, storytellers, and listeners.

1. ACTING COLLECTIVELY AT THE FARM LEVEL

Each of the supply chains developed in response to the challenge posed in Figure 2 of working collectively to earn sustainable price premiums in the marketplace. Country Natural Beef members are very explicit in describing this collective action as a means to an end – they act collectively so that the individual member ranches are able to maintain "every possible bit of independence". In contrast to most cooperative organizations, Country Natural Beef member ranches do NOT invest equity in the organization so there is nothing that can be bought or sold. While many competing natural beef brands have changed ownership in the last decade, this can't happen for Country Natural Beef. The money earned from the sale of cattle flows directly to individual ranching families and the cooperative prides itself on maintaining extremely low overhead and administrative costs (just over 4%)[3]. Organic Valley contrasts with Country Natural Beef in that member farms do need to make an equity investment, equal to 5.5% of the

[2] Links to the complete case studies and the individual web sites are provided in the reference section.
[3] Country Natural Beef hires no staff, instead employing members who act as independent consultants and "internal partners" to handle key functions including production planning, sales and accounting.

farms annual sales. Still the overall business is operated so that member farm returns are maximized, not returns to the cooperative.

The development of a pricing philosophy is central to all four businesses. For Shepherd's Grain the starting point was to unlink the price received by Shepherd's Grain producers from commodity wheat prices so their farmers could receive a more stable and equitable return. Shepherd's Grain decided to set stable, year-long prices based on cost of production plus a reasonable rate of return rather than charge a premium above commodity wheat prices. Cost of production is calculated as the sum of on-farm production expenses, transportation costs, Shepherd's Grain administrative fees and milling fees. Red Tomato, with the business mission to be a "food de-commodifier" so that the high-quality products it markets for farmers earn suitable rewards, uses a less quantitative approach. The Red Tomato pricing philosophy can be traced back to the fair trade model and sets it apart from other produce distributors in the region. Red Tomato refers to it as a *dignity pricing* model. Prices are based on a combination of growers' perceptions of their own production costs, their experiences in the market and their sense of what's fair. It works like this: Red Tomato traders ascertain from growers the following price points: a) the average price recently received for a given product; b) the price they want through the Red Tomato brokerage; and c) the lowest price they will accept with dignity. Armed with this information, Red Tomato traders seek to get the highest reasonable price from a given buyer.

Working collectively requires significant investments in building relationships and understanding and an acceptance of group decisions. Country Natural Beef requires member ranches to participate in semi-annual business meetings. At these meetings, all major decisions are discussed until a consensus is reached. In common with the other As is true for the other producer groups, All Country Natural Beef ranches must follow strict standards on how to produce and agree to group decisions on when and how much to produce. It means that each ranch also commits to spending three weekends a year in the retail marketplace interacting with both supply chain partners and final consumers. One remarkable outcome of these procedures is that all members display an impressive command of the business philosophy and practices. Acting collectively means seeking active participation from within the farm/ranch households. All of these case study organizations are strongly committed to the full participation of women across all aspects of the organization.

Organic Valley places a priority on preparing for the future by providing both an exit strategy for current farmers and a means of entry for the next generation of producers. As Chief Financial Officer Mike Bedessem puts it, "We know what our job is: It's to get to the point where our farmers have a choice—they can farm, they can retire, they can sell to the kids. That's the exit strategy for our current farmers—it's a future for their kids." Similarly, Country Natural Beef founder Connie Hatfield notes "My definition of sustainability is when more than 25 kids below the age of five require daycare at our semi-annual meetings."

All of the farmer organizations recognize that recruiting new members represents an important challenge. Because they are focused on member returns, they add members only when demand for their products clearly exceed supply. This is particularly important because, in general, they choose to treat new members on an equal footing to old members and therefore unexpected reductions in demand reduce everyone's' returns not just the new members[4]. Red

[4] Several groups require a trial membership period but that is intended to make sure the farm/ranch is a good fit not to allow a response to poor markets.

Tomato's approach to recruitment is typical, it seeks farms that meet a set of criteria—neither too large nor too small, produce sufficient volume and variety, have adequate storage, refrigeration, packing and trucking capacity, provide a geographic fit with the rest of the business and have leaders whose temperaments fit the culture of Red Tomato. As is true for the other organizations, Red Tomato relies on existing growers to nominate new growers as a key means of ensuring future product quality and business tranquility. Organic Valley requires that new member and employees successfully complete an extensive education and socialization process. The Cooperative credits these requirements for keeping the organization on mission during periods of rapid growth in sales and personnel.

2. ACTING COLLECTIVELY IN THE VALUE CHAIN

In contrast to direct marketers and to large vertically integrated firms, these value chains depend on cooperation with many other enterprises to get their products to final consumers. By far the biggest of the supply chains studied, Organic Valley focused from the start on selling its products through multi-stage supply chains rather than through direct marketing channels. It credits much of its early success to contracting out the key parts of its processing and distribution systems rather than sinking money into bricks and mortar and performing these supply chain functions itself. It owns only a single processing facility and has virtually all of the Organic Valley milk processed on contract with dairy manufacturing plants located close to the regionally organized milk pools. These are in most instances family-owned independent processors. It also contracts for transportation of both its raw milk and finished products, generally by independent trucking companies, many of which are smaller, family-owned firms. In contrast to the decision not to build physical infrastructure, the cooperative has made significant internal investments in supply chain logistics, and its leaders view excellence in this area as critical to its success. In fact, Organic Valley has spun off its logistics arm as a full subsidiary of the main business.

Country Natural Beef develops business partnerships based on the Japanese model known as "Shin Rai," or mutual support and mutual reward. The cooperative works with business partners who provide complementary services and expertise, and share basic values such as humane animal treatment and land stewardship. These partners maintain Country Natural Beef's identity on its products through to the final consumers. Retail partners include Whole Foods, New Seasons Market, Burgerville and Bon Appétit Management Company. The cooperative faces a significant challenge in balancing its mix of retail partners to ensure sale of the entire animal, rather than just the most sought-after cuts.

Shepherd's Grain uses strategic supply chain partners to replace the capital and expertise that otherwise would be required to handle grain milling and distribution. These partners provided early assistance in assessing wheat varieties and flour quality, and in locating customers. Shepherd's Grain flours are milled at the Archer Daniels Midland (ADM) mill in Spokane, Washington, the only significantly sized flour mill in the region. While ADM is a massive multi-national firm, Shepherd's Grain has developed a close local relationship. The partnership with ADM provides several advantages to Shepherd's Grain including strict assurances that their products remain separate, excellent flour quality, marketplace credibility and a safety net, as ADM assumes ownership of the wheat once it is delivered to the mill. Shepherd's Grain works with distributors such as Food Service of America that act as sales agents for their products. Nearly all sales are direct wholesale, which means that Shepherd's Grain depends on its customers to preserve its brand identity in the marketplace. Strategies for maintaining brand identity include a picture of Shepherd's Grain farmers on the Hot Lips Pizza website and farmer visits at Bon Appétit cafés. More recently, Shepherd's Grain has begun co-branding retail flour products with Stone Buhr. In all of this, Shepherd's Grain seeks out customers and business relationships that value the quality and story behind their products. In 2008, they parted ways with a customer that was only interested in price and not a strategic values-based relationship. Says Kupers, "Maintaining our story and identity are important to us … if that's not important to the 'big guys,' then they can go somewhere else."

The Red Tomato that exists now grew out of unsuccessful attempts to operate on a broader geographic scale and operate the entire physical infrastructure needed to create an alternative food distribution system. In 2003 the organization got rid of the trucks and coolers, and kept the customers and farmers. In other words, Red Tomato became a supply chain coordinator rather than a supply chain operator. The company's ability to coordinate depends on establishing effective, strategic partnerships that provide needed expertise and capacity. From the perspective of the firm's retail business clients, Red Tomato creates value by providing the logistical support necessary for aggregation and distribution so that these retailers can purchase a broad variety of products from a single source.

For distribution services, Red Tomato relies on both its farmers and three independent trucking companies. It has formed retail and food service partnerships with a wide range of businesses ranging from large retailers such as Whole Foods and Trader Joe's to much smaller, independent companies. Part of Red Tomato's mission is to make its exceptional products accessible to consumers where they shop and eat—supermarkets, natural grocery chains, co-ops, independent grocery stores, institutions and restaurants with a commitment to local products. According to Red Tomato's Michael Rozyne, the two key questions that potential partners must answer are "Is Red Tomato important to you? Do your customers want our stuff?" The goal is to work toward long-term business relationships, but there is a recognition that partnerships should begin with a two- or three-year trial period.

3. LEARING ACROSS VALUE CHAINS

In the course of conducting the case study research and disseminating the results we began to recognize the learning that took place when the case study principals read the different cases and interacted with each other during project workshops. Despite focusing on different crops, and being organized in different ways, they quickly formed a community of practice and readily exchanged insights and suggestions. Three examples are:

- The interest sparked by the "dignity price" terminology that Red Tomato has introduced as a means of establishing fair compensation for growers and other approaches for establishing prices in value chains;
- Intense exchanges among case study principals regarding ideas about how to respond to the 2008 economic slowdown internally and in relations with value chain partners;
- Discussions of how to best communicate environmental ethics considerations across value chains.

We now focus much more on this across value chain aspect because it represents an important extension of the community of practice (CoP) concept. The original CoP literature focused on facilitating social learning within individual corporations (Wenger et.al. 2002). The second strand of the CoP literature focused on facilitating virtual learning communities and defined a major role for the public sector (Sobrero 2008 and Sobrero and Craycraft 2008). Our focus is on the unique opportunities and challenges of the detailed information exchanges between groups such as these case study principals who are not in the same firm and have their own learning agenda rather than one set by the public sector. We are experimenting with different ways of exchanging information and through observations and questionnaires will document the costs and benefits that accrue to the participants. Finally we will assess the long term sustainability of the CoP and the transferability of this approach to other participants.

FINAL THOUGHTS

Taken as a whole, the four case studies demonstrate that farms of the middle have both the capacity and the flexibility to work collectively with each other and with their supply chain partners to create mid-scale food value chains that successfully respond to these expanding market opportunities. They also value the ability to learn from each other. As they move forward they must further develop these key areas: 1) adapting and protecting value chain pricing principles; 2) strengthening relationships with strategic business partners; 3) strengthening communication with consumers; 4) deepening product differentiation; 5) achieving greater efficiencies; and 6) addressing organizational positioning and maturation. Additional work must also address the sorely lacking policy instruments and funding, public and private, that will increase the viability of these small and medium-sized farms and their collectively created supply chain partnerships within agriculture's "third tier".

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The four case study reports and related documents are available at:
http://www.agofthemiddle.org/

Web pages for the four organizations:

Country Natural Beef: http://www.oregoncountrybeef.com/

Organic Valley: http://www.organicvalley.coop/

Red Tomato: http://www.redtomato.org/index.php

Shepherd's Grain: http://www.shepherdsgrain.com/